

CLAIMS

1. A method for texturing surfaces of silicon wafers comprising the steps of dipping said silicon wafers (1) in an etching solution of water, concentrated hydrofluoric acid and concentrated nitric acid and setting a temperature for the etching solution, **characterized in that** said etching solution (4) comprises, in percent, 20% to 55% water, 10% to 40% concentrated hydrofluoric acid and 20% to 60% concentrated nitric acid and in that the temperature of said etching solution (4) is between 0 and 15 degrees Celsius.
2. The method as in claim 1, characterized in that said etching solution (4) comprises, in percent, 30% to 40% water, 15% to 30% concentrated hydrofluoric acid and 30% to 50% concentrated nitric acid.
3. The method as in claim 1 or claim 2, characterized in that the temperature of said etching solution (4) is between 7 and 9 degrees Celsius.
4. The method as in one of claims 1 to 3, characterized in that said silicon wafers (1) remain in said etching solution (4) for between 3 and 5 minutes.
5. The method as in claim 1, characterized in that said etching solution (4) comprises, in percent, 31% water, 23% concentrated hydrofluoric acid and 46% concentrated nitric acid, in that the temperature of said etching solution (4) is 8 degrees Celsius, and in that said silicon wafers (1) remain in said etching solution (4) for between 1.5 and 2 minutes.
6. The method as in one of claims 1 to 5, characterized in that said silicon wafers (1) are oriented substantially vertically and in that said etching solution (4) has a flow component.
7. The method as in one of claims 1 to 5, characterized in that said silicon wafers (1) are oriented substantially horizontally and in that said etching solution (4) is quiescent.

8. The method as in claim 7, characterized in that said silicon wafers (1) are moved through said etching solution (4).

9. The method as in one of claims 1 to 8, characterized in that said silicon wafers (1) are polycrystalline.